THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NORBERT HASENBEIN, THOMAS MUEHLENBERND and GERNOT KOEHLER

Appeal No. 1996-3808
Application No. 08/213,832[1]

ON BRIEF

Before JOHN D. SMITH, WARREN, and LIEBERMAN, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

DECISION ON APPEAL

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[1] Application for patent filed March 16, 1994. According t appellants, this application is a continuation of Application No. 08/048,961, filed April 12, 1993; which is a divisional of Application No. 07/448,958, filed December 12, 1989, now abandoned.

This is an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 3, 4 and 9 which are all of the claims remaining in the application.

THE INVENTION

Appellants' invention is directed to a method for the copolymerization of ethylene with up to 4% molar units of C_3 to C_6 alkenoic acid or ester thereof. The process provides for a continuously operated tubular reactor at a pressure of 500 to 5,000 Bar, elevated temperature and the presence of free radical initiators. Two reaction zones are provided. The first reaction zone has a maximum temperature of 240° C. The second reaction zone has a maximum temperature of 300° C. Additional initiator is metered into the beginning of a second reaction zone after the temperature in the first reaction zone has dropped by from 5° C to 20° C.

THE CLAIMS

Claims 3 is illustrative of appellants invention and is reproduced below.

3. A process for the preparation of a copolymer of ethylene containing up to 4% molar of copolymerized units of a C_3-C_6-alkenoic acid or an ester thereof having up to 14 carbon atoms or a mixture of said monomers in a continuously operated tubular reactor at a pressure of from 500 to 5,000 bar and at

elevated temperature in the presence of free-radical initiators which comprises: passing a mixture of said reactants to the inlet port of the tubular reactor only, monitoring the temperature in a first reaction zone and restricting the temperature in said zone to a maximum of about 240°C and, after the temperature has dropped by from 5° to 20°C in said zone, metering further initiator to the beginning of a second reaction zone and completing the reaction at a temperature of up to 300° C.

THE REFERENCES OF RECORD

As evidence of obviousness, the examiner relies upon the following references.

Beals et al. (Beals)	4,175,169	Nov. 20, 1979
Metzger et al. (Metzger)	4,579,918	Apr. 1, 1986

THE REJECTIONS

Claims 3, 4 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Metzger in view of Beals.

OPINION

As an initial matter, appellants' Brief does not contain a statement that claims 3, 4 and 9 do not stand or fall

together.[2] Accordingly, we select claim 3, the sole independent process claim as representative of appellants' invention and limit our consideration to said claim. 37 C.F.R. § 1.192(c)(7) 1995.

We have carefully considered appellants' arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter is unpatentable in view of the applied prior art. Accordingly, we will sustain the examiner's rejection for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

During patent prosecution, claims are to be given their broadest reasonable interpretation consistent with the specification, and the claim language is to be read in view of the specification as it would be interpreted by one of ordinary skill in the art. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983); In re Okuzawa, 537 F.2d 545, 548, 190 USPQ 4564, 466 (CCPA 1976).

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[2] Each of our references to appellants' Brief refer to the Substitute Brief on Appeal.

Our construction of the subject matter as defined by appellants' claims 3 is that the phrase "metering further initiator" does not preclude the presence of additional components such as ethylene, alkenoic acid or esters thereof in addition to the initiator. Accordingly, a disclosure by Metzger of the addition of initiator, ethylene and other monomers to a second zone is sufficient to satisfy the requirements of appellants claimed subject matter supra. See Metzger column 3, lines 38 - 55. Metzger discloses therein that the mainstream of a gaseous mixture of ethylene, C_1 - C_3 alkene carboxylic acid and initiator are fed into the reactor. Thereafter,

> "[T]he mainstream is passed in at the beginning of the reactor, and the sidestream is fed into the reactor in a conventional manner in the region of the second point, at which the temperature reaches a maximum."

Based upon the above considerations, we conclude that Metzger discloses metering initiator to the beginning of a second reaction zone.

As to appellants' requirement in the claimed subject matter that the initiator is inserted after the temperature had

"dropped by from 5° to 20° C in said zone," Metzger discloses in the Examples, column 4, lines 24 - 31, that,

> "{I]n each case, one of the gas streams was fed to the entrance of the reactor, and the other was passed into the reactor at a second feed point, about one third of the way along the total reactor length, after the reaction in the first reactor section had reached a maximum temperature and the temperature of the mixture had begun to decrease again."[3]

We find that Metzger recognized that the additional gas stream containing initiator was added to a second zone only following a decrease in the temperature of the first zone. We further conclude that it would have been obvious to one of ordinary skill in the art to have added further initiator after the temperature had dropped from 5° to 20° C because that temperature range reflects one in which the temperature of the mixture has "begun to decrease." See column 4, line 31. Based upon the above considerations, we conclude that the examiner has established a prima facie case of obviousness against the claimed subject matter before us.

As a rebuttal to the prima facie case of obviousness, appellants rely on the comparative examples in the Table on

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[3] Emphasis ours.

page 7 of the specification. See Brief, page 4.[4] Having reviewed the data present, we conclude that appellants have not met their burden of showing unexpected results. In re Klosak, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). It is not sufficient to assert that the results obtained are unusual or unexpected. The burden of showing unexpected results rests on them who assert them.

Appellants have asserted that there is a showing of unexpected properties in the specification. This argument is not persuasive because appellants have not presented a comparison with the closest prior art. See In re Baxter Travenol Labs., 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991); In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

In the comparative example on page 6 of the specification, appellants state, “that all of the peroxide was fed to the inlet port of the reactor.” However, Metzger discloses the addition of initiator not only to the inlet port of the reactor, but to at least one additional feed point along the

[4] We refer to the Substitute Brief on Appeal.

reactor. Based upon the above considerations, we conclude that the comparative example does not reflect the procedure used in the art of record to Metzger.

Accordingly, based on our consideration of the totality of the record before us, and having evaluated the prima facie case of obviousness in view of appellants' arguments and evidence, we conclude that the preponderance of evidence weighs in favor of obviousness of the claimed subject matter within the meaning of

§ 103. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

DECISION

The rejection of claims 3, 4 and 9 under 35 U.S.C. § 103 for being unpatentable over Metzger in view of Beals is affirmed.

The decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

JOHN D. SMITH Administrative Patent Judge	)
CHARLES F. WARREN Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
PAUL LIEBERMAN Administrative Patent Judge	)

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